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HOW HIGH SCHOOL COOPERATIVE TRAINEES FARE IN THE LABOR MARKET. PHASE C, A FOLLOW-UP STUDY OF 1964 GRADUATES TEN MONTHS AFTER GRADUATION.

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THE 1964 GRADUATES OF MICHIGAN HIGH SCHOOLS WHO HAD BEEN COOPERATIVE TRAINEES WERE SURVEYED 10 MONTHS AFTER GRADUATION. THE HIGH SCHOOL COORDINATORS SUPPLIED ADDRESSES AND CLASS RANK OF THE 5,420 TRAINEES. EACH TRAINEE RECEIVED A QUESTIONNAIRE AND, IF NECESSARY, A FOLLOW-UP LETTER AND DUPLICATE QUESTIONNAIRE WITHIN 2 WEEKS. USABLE QUESTIONNAIRES WERE RETURNED BY 2,957 PEOPLE (55 PERCENT). FINDINGS WERE -- (1) APPROXIMATELY 1 PERCENT WERE UNEMPLOYED, (2) ALMOST 40 PERCENT WERE CONTINUING THEIR EDUCATION, (3) MORE THAN HALF WERE EMPLOYED IN THE FIELD FOR WHICH THEY WERE TRAINED, (4) 27 PERCENT WERE STILL EMPLOYED BY THEIR COOPERATIVE FIRM, AND (5) THEIR AVERAGE RANK WAS SLIGHTLY SUPERIOR TO THE AVERAGE RANK OF THEIR GRADUATING CLASS. RECOMMENDATIONS INCLUDED -- (1) A CONTINUING INVENTORY OF THE CONTRIBUTIONS OF COOPERATIVE EDUCATION, (2) BETTER PROVISIONS FOR REPORTING OF INFORMATION BY LOCAL SCHOOLS, AND (3) THE SCRUTINY OF LOCAL PROGRAMS TO DETERMINE WHETHER STUDENT PLACEMENTS REFLECTED THE STUDENT'S OCCUPATIONAL GOAL AND HIS OCCUPATIONAL INSTRUCTION. (SL)

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How High School Cooperative Trainees Fare in the Labor Market: Phase C

Study of 1964 Cooperative Education Graduates Ten Months After Graduation

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HOW HIGH SCHOOL COOPERATIVE TRAINEES FARE IN THE LABOR MARKET.

PHASE C: A Follow-Up Study of 1964 Graduates Ten Months After Graduation.

Peter G. Haines
and
Lawrence M. Ozzello

A Study by the

Business and Distributive Teacher Education Service
College of Education, Michigan State University
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Michigan State Department of Education

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FOREWORD

As part of the continuing evaluation of vocational education in Michigan a major study of cooperative education was begun in 1963; the project is currently in its fourth year (1965 graduates). This bulletin reports the third annual phase--a study of the 1964 cooperative education graduates ten months after graduation. The project measures the effectiveness of secondary school cooperative occupational education programs by assessing the employment status of the trainees ten months after graduation. To provide unity and to facilitate comparison, the format and research design of this report parallels the one compiled in 1963 about the 1962 graduates[1] and the one compiled in 1964 about the 1963 graduates.[2]

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[1]Peter G. Haines and Brendan Coleman. How High School Cooperative Trainees Fare in the Labor Market. ER 16, Office of Research and Publications, College of Education, Michigan State University, 1963.

[2]Peter G. Haines, Lawrence M. Ozzello, and Horace Griffitts. How High School Cooperative Trainees Fare in the Labor Market: Phase B. ER 23, Office of Research and Publications, College of Education, Michigan State University, 1965.

The 1964 phase of the study reported in this bulletin indicates that cooperative trainees fare exceptionally well in the labor market. Employment is obtained quickly, and residual unemployment is low. Trainees are shown to be representative of all levels of academic achievement, and, as a total group, are actually superior to their graduating classes as a whole.

Many trainees are still working for the employer who trained them. About fifteen (15) percent of the trainees had entered post-high school educational institutions on a full-time basis.

The vocational coordinators of Michigan can take a measure of comfort in the results of this study, because it indicates that the cooperative education program does indeed produce trained employees. However, a detailed study of the data reveals areas for improvement.

This report has been written with teachers, counselors, and administrators foremost in mind. Rather than adhering to a formal research format, the staff felt it wise to present first the major findings and conclusions, followed by a detailed analysis of the findings.

This project is a service of the Business and Distributive Teacher Education staff at Michigan State University with major financial support from the Division of Vocational Education, State Department of Education. The researchers wish to express their thanks to the staff of the Division of Vocational Education for their assistance and to the many vocational coordinators throughout Michigan for their assistance in compiling cooperative trainee lists. The dedicated and valuable secretarial assistance of Miss Dorothy Beck and Mrs. Patricia Ozzello was most helpful.

A subsequent study of the 1965 cooperative education trainees is in progress, as is a four-year longitudinal study of the 1962 graduates and a two-year longitudinal study of the 1964 graduates and will be reported in a subsequent bulletin in this research series.

Peter G. Haines
Lawrence M. Ozzello
East Lansing, Michigan
August, 1966

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SUMMARY: MAJOR FINDINGS AND CONCLUSIONS

THE 1964 COOPERATIVE EDUCATION TRAINEES

This study surveyed the 5420 Michigan high school students who were reported by their schools as being cooperative education trainees at the time of their graduation in June, 1964. Of the 5420 trainees, 55% or 2957 returned usable questionnaires. All data refer to their status as of April, 1965, approximately ten months after graduation. The major findings reveal that:

1. The unemployment rate was low.

   Less than 1% were unemployed ten months after graduation. More than six out of ten of those available for work had obtained their current full-time employment within one month after graduation.

   By ten months after graduation,

   . . . 62% were employed full time;

   . . . 13% were employed part time--most were married or attending a school or college;

   . . . 15% were attending a school or college on a full-time basis; and,

   . . . 2% were in the military service.

2. A significantly large number of trainees--almost four out of ten--were attending college or enrolled in a school beyond the high school on either a full- or part-time basis.

   . . . 32% of the office trainees were attending a school or college. (15% full time)

. . . 40% of the distributive trainees were attending a school or college. (13% full time)

. . . 45% of the trade and industrial trainees were attending a school or college. (21% full time)

3. Of the 1964 trainees, 24% were not in the labor market.

. . . 7% were housewives (and not otherwise employed).

. . . 15% were attending a college or a school.

. . . 2% were in military service.

4. The trainees were putting their training to work by being employed in the field for which trained.

. . . 89% of the office trainees were working in an office occupation.

. . . 28% of the distributive trainees were working in a distributive occupation.

. . . 75% of the industrial trainees were working in an industrial occupation.

5. The employers who trained the cooperative trainees were benefiting by securing full-time workers.

. . . 27% of the cooperative education trainees remained with their cooperative firm ten months after graduation.

. . . 37% of the cooperative trainees have worked for their cooperative employers but have resigned since.

. . . 30% of the office trainees, 23% of the distributive trainees, and 25% of the industrial trainees were with their cooperative firm ten months after graduation.

. . . An additional 32% of the office trainees, 42% of the distributive trainees, and 44% of the industrial

trainees have worked after graduation for their cooperative employers but have resigned since.

6. Cooperative trainees were better than average students academically.

. . . In each occupational group the trainees ranked higher in their graduating class, on an average, than other graduates.

. . . In the upper half of their class were 79% of the office trainees, 46% of the distributive trainees, and 49% of the trade and industrial trainees.

. . . 43% of the office trainees ranked in the upper 25% of their graduating class.

On the basis of these findings one can conclude that cooperative vocational education contributes in helping young people secure employment and does not prevent them from furthering their education. Employers benefit because many trainees remain with their cooperating employer full time after graduation. Cooperative education is provided for achievers at all academic levels, but cooperative trainees as a group have a better academic ranking than the average of their graduating class. A detailed discussion of the findings of this study is included in subsequent parts.

THE STUDY OF 1964 GRADUATES

A. THE METHODS OF THE STUDY

The Problem

The primary outcome of vocational education is presumed to be development of occupational competence; vocational curricula are by nature designed for those who wish to undertake a career in a particular occupational area. It follows, therefore, that one measure of the effectiveness of any vocational curriculum is how well the graduates fare in the labor market upon completion of their training.

In Michigan, the cooperative plan of vocational education is widely used in Class A and B high schools (over 900 enrollment). Under the cooperative plan, a student may enroll either for two years (grades 11 and 12) or for one year (grade 12 only). The student is placed with a cooperating employer who will provide training in the occupation the student has chosen. The work station becomes, in effect, an occupational laboratory with designated employees of the firm becoming the "downtown faculty." The student is paid a regular wage and generally spends 15-25 hours per week with the cooperating firm. In addition, the student-learner (trainee) is enrolled in school in at least one class where the instruction is directly related to his occupational goal and to his needs in his training firm.

In this study the measurement of the contributions of cooperative education was structured by the following questions:

1. What proportion of the graduates (cooperative trainees) were employed approximately ten months after graduation? Do employment rates vary among the three fields of training: office, distributive, and trade and industrial occupations?

2. To what degree do graduates find employment in an occupation the same as, or similar to, the one in which they were trained? Are there differences among those trained in office, distributive, and trade and industrial areas?

3. To what extent do employers of cooperative trainees retain them as full-time employees?

4. Does the cooperative trainee's scholastic ability, as measured by rank in class, compare with that of non-cooperative education students?

5. What is the span of time before the trainee accepted his or her current full-time employment?

6. What additional education do cooperative trainees undertake after graduation?

7. To what extent do cooperative trainees attending a post-high school educational institution concentrate in a field comparable to their cooperative training?

8. To what degree do cooperative trainees attending a post-high school educational institution defray educational expenses by working in the area of their cooperative training?

Population and Sample Size

The population for the study consisted of all students in public high schools in Michigan who met the following criteria:

1. Graduated at the end of the Spring semester, 1964, and

2. At the time of graduation were <u>bona fide trainees</u> in a reimbursable cooperative occupational program in office, distributive, or industrial occupations.

The total number of cooperative trainees in 1964, according to official data from the State Department of Education, was approximately 10,000. However, this figure includes trainees who were 11th graders, some who did not graduate, and some who had been dropped from the cooperative program.

As shown in Table 1, the number of schools submitting lists of trainees was 133; the number of graduating senior cooperative trainees reported by the school coordinators was 5420. Of the schools listed by the state department as having cooperative programs, 22 did not return lists. These 22 schools are estimated to have had about 401 trainees. Therefore, the estimated population was 5821. (See Appendix A for a complete list.)

Usable replies were received from 2957 trainees, representing 55% of the population. The returns were classified as early or late, and a check run was made between the two groups on key questions. This early-late sample treatment is a recognized way of measuring the degree to which non-respondents are similar to respondents. On an inspection basis, an early-late check revealed no discernible difference.

As an additional verification, two months after the second follow-up questionnaire was mailed to the cooperative trainee, three hundred (300) of the non-respondents were contacted by telephone to ascertain their employment status. The non-respondents to be contacted were determined by a stratified random sampling by cooperative education program within the telephone area codes 517 and 313. When a non-respondent could not be contacted, the next name on the list

was used. The results from the telephone survey revealed no significant difference in employment status from those who had replied to the questionnaire.

Therefore, one can assume that the non-respondents would have responded in basically the same way as those who did. Thus, the data shown are applicable to the total population.*

TABLE 1

POPULATION AND SAMPLE SIZES

Number of Trainees	Total
Reported by schools returning lists (133)	5,420
Number of schools not returning lists - 22 (Estimated from DPI lists).	401
Total estimated population (Senior Graduates).	5,821
Trainees responding (Usable Replies).	2,957
Trainees not responding	2,874

Procedures

The coordinators of each school were contacted and requested to return a list of trainees with their current addresses and their rank in the 1964 graduating class. A questionnaire card was mailed to each trainee along with a letter explaining the purpose and

*Although office trainees responded in larger numbers than distributive or trade and industrial trainees, no marked effect was anticipated because most of the data were reported by field.

importance of the study. Two weeks later, those who had not responded to the original mailing received a follow-up letter and a duplicate questionnaire card.

Questionnaires were screened for completeness; some were followed up to secure missing information. All information was coded and transferred to punch cards. Each card carried a code identifying the trainee's high school so that data could be summarized, if desired, for each school. The cards are stored and can be used in longitudinal studies in succeeding years. Tabulation and data analysis was done by a program on the CDC 3600 computer. This service was provided by the Computer Center of Michigan State University.

B. FINDINGS OF THE STUDY

The findings of the study are reported in this section according to six major areas of interest:

1. What is the employment status of cooperative trainees when measured ten months after graduation?
2. To what degree do cooperative trainees continue in the occupational fields for which they have been trained?
3. To what degree do trainees remain in the same locality ten months after graduation?
4. What type industry are trainees employed by ten months after graduation?
5. What is the average income earned by trainees ten months after graduation?
6. Of what academic quality are the cooperative trainees?

The Employment Status of Graduates

One measure of the effectiveness of vocational education is the degree to which graduates find employment. As Table 2 shows, six out of ten graduates were employed full time ten months after graduation. In addition, more than one out of ten was employed part time; most of these were either students in the same post-high school educational institution or housewives. Three out of ten were not in the labor market, being full-time college students, full-time housewives, or in the military service. The unemployment rate was very low; about 1% (1 out of 100) were unemployed ten months after graduation.

Further analysis of the 1% unemployment revealed that of the 29 respondents unemployed, one had just received a medical discharge from the military service; one was unemployed for one week while changing jobs; two had just completed a nine-month, post-secondary training course; 17 were housewives now seeking to re-enter the labor market after having a baby or having moved to be with their husbands. Therefore, in the normal meaning of "unemployment" only eight (8) of the respondents (2957) or about 1/4 of 1% could be classified as having been looking for work for a period of time.

The significance of this low unemployment rate (1%) among cooperative education graduates can best be shown by comparing it to the Michigan rate of unemployment. In March, 1965, the time of this investigation, the State of Michigan had an over-all unemployment rate of 3.4% and an estimated unemployment rate of 7% among comparable age groups (18-19 years old).*

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*Interview with Fred W. Burdick, Michigan Employment Security Commission, Lansing, Michigan, April, 1965.

TABLE 2

EMPLOYMENT STATUS OF TRAINEES BY PROGRAM
(TEN MONTHS AFTER GRADUATION)

Employment Status	Field of Cooperative Training			Total
	Office	Distributive	Trade and Industrial	
Employed Full Time				
N	1,042	479	300	1,821
%*	64.9	58.2	56.7	61.6
Employed Part Time				
N	187	128	72	387
%	11.7	15.6	13.6	13.1
Attending School or College**				
N	235	106	112	453
%	14.7	12.9	21.2	15.3
Military Service				
N	4	47	21	72
%	.2	5.7	3.8	2.4
Housewife				
N	120	56	19	195
%	7.4	6.8	3.6	6.6
Unemployed				
N	17	7	5	29
%	1.1	.8	.9	1.0
No Reference				
N	3	-	1	4
%	.2	-	.2	.1
TOTAL Respondents	1,605	823	529	2,957

*Read percentages vertically.

**Refers to those attending school or college full time.

Analysis of Table 2 shows some differences in status when the total number of cooperative trainees is classified according to the occupational area in which they were trained. More distributive and trade and industrial trainees are in military service than are office trainees. At least a partial explanation for this is that fewer office trainees are male than are either the distributive or the trade and industrial trainees. The unemployment rate for all three groups is about the same although slightly more office trainees are unemployed ten months after graduation than are distributive or trade and industrial trainees. The unemployed office trainees are primarily housewives seeking to re-enter the labor market.

The rate of part-time employment among distributive trainees is slightly more than that of the trade and industrial trainees. In turn, the rate of part-time employment for the trade and industrial trainees is a little more than that of the office trainees. This is partly explained by the fact that more distributive trainees work part-time while attending a school or college, and trade and industrial trainees often have to work part time while attending trade schools in order to qualify as apprentices or to become certified in the trade area.

The percentage of office trainees employed full time is considerably higher than that of either distributive or trade and industrial trainees. This is explained by the fact that most office trainees are females who attend college or school in fewer numbers than male trainees, do not usually enter military service, and do not work part time as often as do male students. (See Table 3.)

TABLE 3

EMPLOYMENT STATUS OF TRAINEES BY PROGRAM AND SEX
(TEN MONTHS AFTER GRADUATION)

Employment Status	Field of Cooperative Training						Total	
	Office		Distributive		Trade and Industrial			
	Male	Female	Male	Female	Male	Female	Male	Female
Employed Full Time								
N	39	1,003	247	232	243	57	529	1,292
%*	51.3	65.6	59.0	57.4	67.1	34.1	61.7	61.5
Employed Part Time								
N	11	176	68	60	40	32	119	268
%	14.5	11.5	16.2	14.8	11.0	19.2	13.9	12.8
Attending School or College**								
N	24	211	57	49	57	55	138	315
%	31.6	13.8	13.6	12.1	15.8	32.9	16.1	15.0
Military Service								
N	2	2	46	1	19	2	67	5
%	2.6	.1	11.0	.3	5.3	1.2	7.8	.2
Housewife								
N	-	120	-	56	-	19	-	195
%	-	7.9	-	13.9	-	11.4	-	9.3
Unemployed								
N	-	17	1	6	3	2	4	25
%	-	1.1	.2	1.5	.8	1.2	.5	1.2
No Reference								
N	-	3	-	-	1	-	1	3
%	-	.2	-	-	.3	-	.1	.1
TOTAL	76	1,529	419	404	362	167	857	2,100

*Read percentages vertically.

**Refers to those attending school or college full time.

Table 3 also shows a considerably higher proportion of male than female cooperative trainees are attending school or college. Of the female cooperative education participants attending a post-high school educational institution, the trade and industrial trainees have a higher percentage than do either the office or distributive trainees. Training for careers in nursing or cosmotology account for most of the rate of difference between post-secondary education programs for female cooperative trainees.

Of the male students, the trade and industrial trainees are working full time to a greater extent than either of the others. On the other hand, a lesser proportion of the distributive trainees attend a post-high school educational institution, but they do enter the military service in greater numbers.

Comparative Employment Status of Graduates

Consistency has always been one of the measures of a good educational program. Does it measure or show a similar trend year after year? When one compares the status of graduates ten months after graduation for three consecutive years, 1962[1], 1963[2], and 1964[3], a similar pattern was shown. Full-time employment remains almost constant at slightly more than 60% of the trainees. Unemployment decreased each year for the cooperative education graduates, with 3.1% for the 1962 graduates, 1.1% for the 1963 graduates, and

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[1]Op. Cit., 1962.

[2]Op. Cit., 1963.

[3]See Table 2.

1.0% for the 1964 graduates. The percent in military service also decreased each year about one percent. There was a gradual increase in housewives who were not employed or going to school or college. The percentage employed part time and the number going to college varied within these categories due to a different method of recording for the study. It is estimated that between 15 and 20 percent were attending a school or college full time for each of the three years. Approximately the same number were attending a school or college on a part-time basis. Almost all attending a post-secondary educational institution on a part-time basis also worked full or part time.

TABLE 4

COMPARISON OF OCCUPATIONAL CHANGES BY PROGRAM FOR TRAINEES WHO GRADUATED IN JUNE, 1962, 1963, AND 1964

Occupational Area Ten Months After Graduation	Field of Cooperative Training								
	Office			Distributive			Trade and Industrial		
	1962	1963	1964	1962	1963	1964	1962	1963	1964
Office									
N	789	498	1,101	69	87	177	32	27	46
%*	93.1	85.1	92.2	24.1	29.6	28.8	11.7	14.0	12.5
Distributive									
N	27	29	24	174	103	186	35	24	27
%	3.2	5.0	2.0	60.8	35.0	30.3	12.8	12.4	7.3
Trade and Industrial									
N	32	55	68	43	91	250	207	138	294
%	3.7	9.4	5.7	15.0	31.0	40.7	75.5	71.5	79.7
Other (or unclassified)									
N	-	3	1	-	13	1	-	4	2
%	-	.5	.1	-	4.4	.2	-	2.1	.5
No Reference**									
N	-	47	40	19	41	40	16	60	24
TOTAL	857	632	1,234	305	335	654	290	253	393

*Read percentages vertically.

**All "no reference" answers were omitted to compute actual percentages.

How Long Are Trainees Unemployed After Graduation?

Among the characteristics of today's labor market for many young people is not only substantial unemployment, but also a considerable span of time before the first job is found.* Table 5 reveals a considerably different picture for the cooperative graduates of 1964. Over 78% of all cooperative trainees were employed in their current position by the end of the summer.

It is possible (although the study did not check for this) that these figures are conservative because some graduates could have been employed full time after two or three months but then decided to enroll in a school or college; to fulfill their military service obligation; or possibly to change full-time positions.

As Table 5 shows, the office and the trade and industrial trainees obtained permanent full-time employment a little more readily than did distributive trainees by the end of the first month after graduation. However, all occupational groups were approximately equal on full-time permanent employment by the end of six months.

As a rule, there was little over-all percentage difference between male or female trainees in length of time to obtain current full-time employment (Table 6). However, significant differences were indicated by sex within a program. The female office trainees obtained their current full-time employment more readily than did male trainees. In both the distributive and the trade and industrial areas, the male trainees obtained full-time employment more readily. The average time

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*Ibid., April, 1965.

TABLE 5

ELPASED TIME BETWEEN GRADUATION OF TRAINEES
AND CURRENT FULL-TIME EMPLOYMENT
BY MONTH AND PROGRAM*

Number of Months Before Current Full-Time Position	Percent of Trainees in Current Full-Time Employment							
	Office		Distributive		Trade and Industrial		Total	
	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative
1 or Less	63.7	63.7	52.6	52.6	60.8	60.8	60.3	60.3
1 - 2	10.2	73.9	7.4	60.0	8.4	69.2	9.2	69.5
2 - 3	8.7	82.6	9.9	69.9	10.3	79.5	9.2	78.7
3 - 4	4.7	87.3	8.1	78.0	3.8	83.3	5.4	84.1
4 - 5	2.2	89.5	5.2	83.2	5.0	88.3	3.5	87.6
5 - 6	2.3	91.8	3.3	86.5	2.8	91.1	2.6	90.2
6 - 7	2.0	93.8	3.1	89.6	3.3	94.4	2.5	92.7
7 - 8	2.1	95.9	3.5	93.1	1.3	95.7	2.4	95.1
8 - 9	2.1	98.0	2.7	95.8	2.3	98.0	2.3	97.4
9 - 10	2.0	100.0	4.2	100.0	2.0	100.0	2.6	100.0

*This table portrays percentages on current full-time employment and does not necessarily present an accurate picture of first full-time employment. The latter would be a greater percentage for the earlier months due to the possibility of changing full-time jobs.

TABLE 6

ELAPSED TIME BETWEEN GRADUATION OF TRAINEES
AND CURRENT FULL-TIME EMPLOYMENT
BY MONTH, PROGRAM, AND SEX*

Number of Months Before Current Full-Time Position	Percent of Trainees in Current Full-Time Employment															
	Office				Distributive				Trade and Industrial				Total			
	Male		Female		Male		Female		Male		Female		Male		Female	
	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative
1 or Less	48.7	48.7	64.3	64.3	57.9	57.9	47.1	47.1	62.1	62.1	54.4	54.4	59.2	59.2	60.8	60.8
1 - 2	12.8	61.5	10.1	74.4	5.7	63.6	9.1	56.2	9.1	71.2	7.0	61.4	7.8	67.0	9.8	70.6
2 - 3	2.6	64.1	8.9	83.3	8.2	71.8	11.6	67.8	11.1	82.3	7.0	68.4	9.1	76.1	9.3	79.9
3 - 4	5.1	69.2	4.7	88.0	7.3	79.1	9.1	76.9	3.3	85.6	5.3	73.7	5.3	81.4	5.5	85.4
4 - 5	5.1	74.3	2.1	90.1	4.5	83.6	6.0	82.9	3.3	88.9	12.3	86.0	4.0	85.4	3.3	88.7
5 - 6	7.7	82.0	2.1	92.2	3.2	86.8	3.4	86.3	2.1	91.0	5.3	91.3	3.0	88.4	2.5	91.2
6 - 7	2.6	84.6	2.0	94.2	2.8	89.6	3.4	89.7	4.1	95.1	-	91.3	3.4	91.8	2.1	93.3
7 - 8	10.3	95.9	1.8	96.0	4.0	93.6	3.0	92.7	1.2	96.3	1.7	93.0	3.2	95.0	2.0	95.3
8 - 9	-	95.9	2.2	98.2	2.8	96.4	2.6	95.3	2.1	98.4	3.5	96.5	2.3	97.3	2.3	97.6
9 - 10	5.1	100.0	1.8	100.0	3.6	100.0	4.7	100.0	1.6	100.0	3.5	100.0	2.7	100.0	2.4	100.0

*This table portrays percentages on current full-time employment and does not necessarily present an accurate picture of first full-time employment. The latter would be a greater percentage for the earlier months due to the possibility of changing full-time jobs.

expired for office trainees to obtain their current full-time employment was two and one-tenth (2.1) months; with distributive trainees almost the same with two and two-tenths (2.2) months; and the trade and industrial trainees followed with about one-half month longer with two and nine-tenths (2.9) months. (See Appendices B and C for a complete month-by-month and cumulative analysis by program and sex.)

Degree to Which Trainees Use Occupational Training

One measure of effectiveness of vocational education is the degree to which the trainee enters and remains in the occupation for which he has been trained. There are two aspects: (1) the degree to which trainees switch occupational fields, and (2) the degree to which trainees remain with the employer who provided their cooperative training.

Switching Occupational Fields. Educational personnel who have looked seriously at vocational education know that an occupational education program has general occupational outcomes as well as specific occupational outcomes. In addition, there are in our modern economic society many occupations in which a knowledge of several fields is required. Therefore, it is not easy to determine if a trainee has indeed switched to an occupation other than that for which he was trained. In this study, "switching" was defined as a situation in which the job title of the individual ten months after graduation was outside of the broad family of occupations in which the individual was trained. For example, if a young woman were a distributive trainee and is working now as an office worker in a retail store, she is defined in this study as having switched occupations even though her distributive knowledges

are probably of some value to her on her present job. The definition in this study, then, is a tight one.

Table 7 reveals that office and trade and industrial trainees show far less occupational switching than do distributive trainees; in each field the proportions remaining in the occupation are: office--92%, distributive--30%, and trade and industrial--80%.* The probable reason for this variation is revealed by analyzing the switches made by male and female trainees in Table 8. The most significant cases of occupational switching are shown by female distributive trainees who became office workers (52%) and male distributive trainees who became trade and industrial workers (57%). A similar switch is shown by the number of female industrial trainees who became office workers (33%). (For further job-shift detail on the various classifications within the occupational areas, see Appendices D and E.)

On the basis of the evidence shown in Tables 7 and 8, it can be argued successfully that cooperative occupational training generally results in substantial numbers of trainees staying in the occupational area for which they were trained.

Comparative Analysis of Occupcational Change

A comparative analysis of the occupational shifts, Table 9, within a cooperative program is basically the same for each of the three-year periods. The "occupational change" percent of office trainees and trade and industrial trainees remains fairly constant

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*All percentages in Tables 7 and 8 have been recomputed for presentation here to give a factual picture of actual responses. All "no response" answers were omitted.

TABLE 7

DEGREE TO WHICH TRAINEES REMAIN IN OCCUPATIONAL FIELDS, BY PROGRAM

Occupational Area Ten Months After Graduation	Field of Cooperative Training			Total
	Office	Distributive	Trade and Industrial	
Office				
N	1,101	177	46	1,324
%*	89.2	27.1	11.7	58.0
Distributive				
N	24	186	27	237
%	2.0	28.4	6.9	10.4
Trade and Industrial	68	250	294	612
%	5.5	38.2	74.8	26.8
Other (or unclassified)				
N	1	1	2	4
%	.1	.2	.5	.2
No Reference				
N	40	40	24	104
%	3.2	6.1	6.1	4.6
TOTAL	1,234	654	393	2,281

*Read percentages vertically.

TABLE 8

DEGREE TO WHICH TRAINEES REMAIN IN OCCUPATIONAL FIELDS,
BY PROGRAM AND SEX
(TEN MONTHS AFTER GRADUATION)

Occupational Area Ten Months After Graduation	Field of Cooperative Training						Total	
	Office		Distributive		Trade and Industrial			
	Male	Female	Male	Female	Male	Female	Male	Female
Office								
N	21	1,080	27	150	17	29	65	1,259
%*	40.4	91.4	7.5	51.2	5.6	31.9	9.1	80.4
Distributive								
N	3	21	115	71	24	3	142	95
%	5.8	1.8	31.9	24.3	8.0	3.3	19.9	6.1
Trade and Industrial								
N	22	46	186	64	239	55	447	165
%	42.3	3.9	51.5	21.8	79.1	60.4	62.5	10.5
Other (or unclassified)								
N	-	1	-	1	2	-	2	2
%	-	.1	-	.3	.7	-	.3	.1
No Reference								
N	6	34	33	7	20	4	59	45
%	11.5	2.8	9.1	2.4	6.6	4.4	8.2	2.9
TOTAL	52	1,182	361	293	302	91	715	1,566

*Read percentages vertically.

TABLE 9

COMPARATIVE EMPLOYMENT STATUS OF TRAINEES
WHO GRADUATED IN JUNE OF 1962, 1963, AND 1964

Employment Status Ten Months After Graduation	Year Trainee Graduated		
	1962*	1963*	1964
Employed Full Time			
N	1,150	892	1,821
%	62.0	60.1	61.6
Employed Part Time			
N	257	271	387
%	13.9	18.4	13.1
Attending School or College			
N	544	555	453
%	29.3	37.7	15.3
Military Service			
N	83	52	71
%	4.5	3.5	2.4
Housewife			
N	87	76	195
%	4.7	5.2	6.6
Unemployed			
N	57	17	29
%	3.1	1.1	1.0
TOTAL			
N	1,855	1,472	2,957

*In a few cases respondents were classified into two or more categories such as attending school and also working. Therefore, the percentages add up to more than 100%.

with most of the trainees remaining in an occupation or job comparable to their high school cooperative program. The distributive trainees present a somewhat different picture. For each of the three years they have left the distributive area in progressive numbers and entered a trade and industrial occupation. Again, this shift of distributive trainees can, at least partially, be explained by the job market. With the current industrial expansion and the shortage of workers in that area, distributive trainees can readily obtain employment in this area as workers and apprentices for a higher wage than was available in the distributive occupation.

Do Trainees Remain With Their Cooperative Employer? One of the reasons why employers participate in a cooperative program is to gain the advantage of securing full-time employees who have been screened by the firm over a period of time, who know the firm and its purposes, and who have been trained in the firm's methods. Table 10 reveals that there is, on the part of the cooperative employers, apparently great satisfaction with the cooperative trainees. Even in a labor market where supply is greater than demand, 65-70% of all trainees have, since graduation, worked for or are working for, their cooperative education employer.

Interestingly enough, the percentages shown in Table 10 are remarkably similar in each of the three occupational fields.

Degree to Which Trainees Remain in Locality After Graduation

When one considers the increased mobility of the American public, and in particular the youth of our nation, one could surmise that occupationally-trained graduates would tend to leave local

TABLE 10

DEGREE TO WHICH TRAINEES REMAIN WITH THEIR
HIGH SCHOOL COOPERATIVE PROGRAM EMPLOYER
BY PROGRAM AND SEX
(TEN MONTHS AFTER GRADUATION)

	Field of Cooperative Training							
	Office		Distributive		Trade and Industrial		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Presently Employed by Cooperative Firm								
N	12	463	100	92	93	39	205	594
%*	15.8	30.2	23.9	22.8	25.7	23.4	23.9	28.3
Have Worked for Cooperative Employer Since Graduation But Are Not Now								
N	41	472	184	165	164	71	389	708
%	53.9	30.9	43.9	40.8	45.3	42.5	45.4	33.7
Not Employed By Cooperative Employer Since Graduation								
N	23	579	129	141	105	56	257	776
%	30.3	37.9	30.8	34.9	29.0	33.5	30.0	37.0
No Reference								
N	-	15	6	6	-	1	6	22
%	-	1.0	1.4	1.5	-	.6	.7	1.0
TOTAL								
N	76	1,529	419	404	362	167	857	2,100
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Read percentages vertically.

municipalities for the so-called "greener pastures." However, Table 11 shows that ten months after graduation more than eight out of ten (83%) are still residing in the same county where they received cooperative training. This figure, though impressive, does not portray the entire holding power of communities training youth for an occupational field. Some cooperative education programs cover Standard Metropolitan Areas (SMA) and thus at times overlap county lines. In other cases, a transfer to a new position a short distance away could mean employment in an adjacent county. Almost eight percent (7.9) of the trainees who now work in adjacent counties would, if redistributed to the SMA scales, be considered as in the same general locality where the original cooperative training took place. This would mean about 91% of these occupationally-trained individuals remain in the same general vicinity where they received their training.

Of those now working out of state, most are either in the military service or are wives of servicemen.

Type Industry of Employer

An indication of the need for cooperative training for specific job classifications can be determined by surveys of jobs held by these high school graduates. Table 12 shows the type of industries employing cooperatively-trained high school graduates ten months after their graduation.

The service industry employed the greatest proportion of the female trainees (49%), whereas, industrial firms employed a higher proportion of male trainees (41%).

TABLE 11

DEGREE TO WHICH TRAINEES CURRENTLY WORKING REMAIN IN LOCALITY OF TRAINING (TEN MONTHS AFTER GRADUATION)

Program and Sex	Michigan			Out of State	No Reference	Total
	Same County	Adjacent County	Non-Adjacent County			
Office						
Male						
N	44	2	2	3	1	52
%*	84.6	3.9	3.9	5.8	1.8	100
Female						
N	1,022	96	35	29	2	1,184
%	86.3	8.1	3.0	2.4	.2	100
Total						
N	1,066	98	37	32	3	1,236
%	86.3	7.9	3.0	2.6	.2	100
Distributive						
Male						
N	260	28	15	57	1	361
%	72.0	7.8	4.2	15.7	.3	100
Female						
N	256	19	8	8	2	293
%	87.4	6.5	2.7	2.7	.7	100
Total						
N	516	47	23	65	3	654
%	78.9	7.2	3.5	9.9	.5	100
Trade and Industrial						
Male						
N	235	27	7	33	-	302
%	77.8	8.9	2.4	10.9		100
Female						
N	78	7	2	4	-	91
%	85.7	7.7	2.2	4.4		100
Total						
N	313	34	9	37	-	393
%	79.6	8.7	2.3	9.4		100
TOTAL						
N	1,895	179	69	134	6	2,283
%	83.0	7.9	3.0	5.9	.2	100

*Read percentages horizontally.

TABLE 12

TYPE INDUSTRY OF EMPLOYER OF TRAINEE
BY PROGRAM AND SEX
(TEN MONTHS AFTER GRADUATION)

Industry	Field of Cooperative Training						Total	
	Office		Distributive		Trade and Industrial			
	Male	Female	Male	Female	Male	Female	Male	Female
Industrial								
N	18	219	129	31	148	7	295	257
%*	34.6	18.5	35.7	10.6	49.0	7.7	41.3	16.4
Retail								
N	11	209	144	129	50	12	205	350
%	21.2	17.7	39.9	44.0	16.6	13.2	28.7	22.3
Personal and Business Service								
N	14	586	28	116	68	68	110	770
%	26.9	49.4	7.8	39.6	22.5	74.7	15.4	49.1
Government (non-military)								
N	6	149	8	14	11	2	25	165
%	11.5	12.6	2.2	4.8	3.6	2.2	3.5	10.5
Military								
N	2	3	51	1	21	2	74	6
%	3.9	.3	14.1	.3	7.0	2.2	10.3	.4
Other**								
N	1	18	1	2	4	-	6	20
%	1.9	1.5	.3	.7	1.3	-	.8	1.3
TOTAL								
N	52	1,184	361	293	302	91	715	1,568
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Read percentages vertically.

**Includes those not classified above, those undeterminable, and those that did not respond to the question.

When the three fields of cooperative training are considered individually, the service industry employs the greatest portion of female office trainees (49%) followed by industrial firms with about 19%. Industrial firms employ more of the male office trainees (35%) followed by the service industry with 27%.

Of the distributive trainees most are employed (40% of the male and 44% of the female trainees) by retail firms. Industrial firms are second in the employment of male distributive trainees (36%), while the service industry is second in the employment of female trainees (40%).

In the trade and industrial field, industrial firms lead in the employment of male trainees (49%) followed by the service industry (23%). Of the female trainees in this field, more than seven out of ten (75%) are employed in the service industry with the remainder fairly evenly distributed among the other industries.

Average Income Per Week

The cooperatively-trained, full-time male employee receives more money per week than does the female trained employee ten months after graduation--as shown in Table 13. The male trade and industrial trainees receive more per week ($105) than do either the distributive ($103) or the office ($93) trainees. This fact could account for some of the office and distributive trainees accepting positions in this field.

The cooperatively-office-trained, full-time female employees received an average of $69 per week while the distributive trainees received $61, followed closely by the trade and industrial trainees at $58 weekly.

TABLE 13

AVERAGE TRAINEE INCOME PER WEEK
BY PROGRAM, SEX, AND WORK STATUS
(TEN MONTHS AFTER GRADUATION)
(To Nearest Dollar)

Program and Sex	Employment Status			
	Full Time		Part Time	
	Number Responding	Dollars	Number Responding	Dollars
Office				
Male	38	93	11	30
Female	974	69	176	26
Distributive				
Male	235	102	62	37
Female	223	61	52	25
Trade and Industrial				
Male	243	105	36	50
Female	57	58	29	24

The Academic Quality of Cooperative Trainees

Some teachers, counselors, and administrators have voiced the opinion that cooperative students are low-level academically. The data in Table 14 dispel that notion quite convincingly. It may be true that, in a given school, cooperative trainees are of poor quality academically, but as a group they achieve as well or better than other graduates in the schools from which they come. A note should be made here that vocational programs should serve the needs of those students who will enter the world of work upon graduation; a world where occupations have varying requirements of academic ability. It should also be remembered that, in some occupations, sheer academic quality is not the prime requisite. The point is that, while intellectual achievement is not a sole criterion for success in an occupation, the rank in class may be an indicator of motivation, a factor of significance in most forms of employment.

Trainee's Rank in Graduating Class. As Table 14 shows, of those schools reporting class standing, roughly six out of ten cooperative trainees are in the upper half of their graduating classes, and about one of ten is in the bottom quarter. The trade and industrial trainees most closely approximate an equal distribution among the quartiles. Six of ten distributive trainees are from the middle two quartiles. The office trainees exhibit remarkable academic achievement; almost half of them were in the upper quarter of their high school class and more than seven out of ten were in the upper half of their class.

TABLE 14

TRAINEE'S RANK IN GRADUATING CLASS
BY PROGRAM AND SEX

Quartile	Field of Cooperative Training						Total	
	Office		Distributive		Trade and Industrial			
	N	%*	N	%	N	%	N	%
1st Quartile (Top 25%)								
Male	21	27.6	34	8.1	53	14.6	108	12.7
Female	673	44.0	70	17.3	53	31.7	796	37.9
Total	694	43.2	104	12.6	106	20.0	904	30.6
2nd Quartile								
Male	24	31.6	109	26.0	91	25.2	224	26.1
Female	545	35.7	122	30.2	62	37.1	729	34.7
Total	569	35.5	231	28.1	153	28.9	953	32.2
3rd Quartile								
Male	24	31.6	134	32.0	113	31.2	271	31.6
Female	228	14.9	129	31.9	29	17.4	386	18.4
Total	252	15.7	263	32.0	142	26.8	657	22.2
4th Quartile (Bottom 25%)								
Male	5	6.6	126	30.1	98	27.1	229	26.7
Female	58	3.8	58	14.4	14	8.4	130	6.2
Total	63	3.9	184	22.4	112	21.2	359	12.2
No Reference								
Male	2	2.6	16	3.8	7	1.9	25	2.9
Female	25	1.6	25	6.2	9	5.4	59	2.8
Total	27	1.7	41	4.9	16	3.1	84	2.8
TOTAL	1,605	100.0	823	100.0	529	100.0	2,957	100.0

*Read percentages vertically.

How Many Graduates Further Their Education? There is a common misconception among some school personnel that vocational education students are not among the college-bound. The results of this study indicate that a significant number of cooperative trainees do further their education. As Table 15 shows, approximately 37% of the trainees responding to the questionnaire were attending a school or college ten months after their graduation, a percentage which approximates the state average for all high school graduates.

Analysis of individual responses reveals that, of this number, 41% had matriculated to a four-year college, 31% were at two-year public colleges, and 23% were in some sort of private post-high school educational institution, ranging from full-time attendance to part-time attendance in schools such as trade or technical institutes and business schools. The proportion of trade and industrial trainees attending a school or college is considerably greater than either office or the distributive trainees. However, more office trainees attend four-year colleges than do the others. The distributive trainees appear to attend the community-junior colleges more often.

A greater proportion of the male cooperative trainees attend a post-high school educational institution than do female trainees (Table 15). Almost one-half of the male trainees furthered their education while only about one-third of the female trainees did.

However, about 52% of the female trade and industrial trainees attended a post-high school program. This could be accounted for by the number of girls entering fields not offered at the high school level, such as practical or registered nursing and cosmotology.

TABLE 15

TRAINEES ATTENDING A SCHOOL OR COLLEGE
BY PROGRAM*
(TEN MONTHS AFTER GRADUATION)

Post High School Institution	Field of Cooperative Training			Total
	Office	Distributive	Trade and Industrial	
Four-Year College or University				
N	245	111	84	440
%**	47.6	34.0	35.2	40.8
Two-Year Public College				
N	140	116	79	335
%	27.2	35.6	33.0	31.0
Private Business, Trade or Technical Institute				
N	105	81	67	253
%	20.4	24.8	28.0	23.4
Other***				
N	24	18	9	51
%	4.8	5.6	3.8	4.8
TOTAL Attending School or College				
N	514	326	239	1,079
%	100.0	100.0	100.0	100.0
Percent of Total Respondents	32.0	39.5	45.2	36.5

*Includes full-time and part-time students.

**Read percentages vertically.

***Includes those not classified above, those undeterminable, and those that did not respond to the question.

TABLE 16

TRAINEES ATTENDING A SCHOOL OR COLLEGE
BY PROGRAM AND SEX*
(TEN MONTHS AFTER GRADUATION)

Post High School Institution	Field of Cooperative Training						Total	
	Office		Distributive		Trade and Industrial			
	Male	Female	Male	Female	Male	Female	Male	Female
Four-Year College or University								
N	26	219	56	55	56	28	138	302
%**	54.2	47.0	29.3	40.7	36.6	32.6	35.2	44.0
Two-Year Public College								
N	10	130	79	37	59	20	148	187
%	20.8	27.9	41.4	27.4	38.6	23.3	37.8	27.2
Private Business, Trade or Technical Institute								
N	11	94	43	38	29	38	83	170
%	22.9	20.2	22.5	28.2	19.0	44.1	21.2	24.7
Other***								
N	1	23	13	5	9	-	23	28
%	2.1	4.9	6.8	3.7	5.8	-	5.8	4.1
TOTAL Attending School or College								
N	48	466	191	135	153	86	392	687
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent of Total Respondents	61.1	30.5	45.6	33.4	42.3	51.5	45.7	32.7

*Includes full-time and part-time students.

**Read percentages vertically.

***Includes those not classified above, those undeterminable, and those that did not respond to the question.

Relationship of College Program to High School Cooperative Program. Another measuring device that indicates effectiveness of a high school cooperative program is the degree to which trainees continue their education in the occupational field. Table 17 indicates that of all respondents attending school or college, about 58% are concentrating in fields directly or indirectly associated with their high school cooperative training program. Both office (59%) and trade and industrial trainees (57%) continue similar programs in college to a greater extent than do distributive trainees (49%).

Table 18 indicates that most of the cooperative education trainees who are furthering their academic education are doing it either directly or indirectly in the same area of their cooperative training. Over one-half of the male trainees are concentrating in the field of their cooperative education with office at 81%; trade and industrial at 61%; and distributive at 56%. The female trainees show a greater spread of concentration in their cooperative area. The female trade and industrial trainees (79%) either directly or indirectly tend to concentrate in the area of their training; the office trainees (58%) do the same, followed by the distributive trainees (39%) in that order.

Degree to Which Trainees Work While Furthering Their Education. The data in Table 19 show that of the cooperative trainees attending a school or college, six out of ten are working full or part time (59%). Of this group, seven out of ten (68%) of the trade and industrial trainees are employed, while fifty-five (55%) of the office trainees and fifty-three percent (53) of distributive trainees earn money while attending a school or college.

TABLE 17

RELATIONSHIP OF TRAINEE'S COLLEGE PROGRAM
TO HIGH SCHOOL COOPERATIVE PROGRAM*

High School Trainee Program	Relationship of College To High School Program				Total
	Direct	Indirect	None	Cannot Determine	
Office					
N	238	67	171	38	514
%**	46.3	13.0	33.3	7.4	100.0
Distributive					
N	114	46	144	22	326
%	35.0	14.1	44.2	6.7	100.0
Trade and Industrial					
N	142	19	69	9	239
%	59.4	7.9	28.9	3.8	100.0
TOTAL					
N	494	132	384	69	1,079
%	45.8	12.2	35.6	6.4	100.0

*Includes both full-time and part-time students.

**Read percentages horizontally.

TABLE 18

RELATIONSHIP OF TRAINEE'S COLLEGE PROGRAM
TO HIGH SCHOOL COOPERATIVE PROGRAM
BY SEX*

High School Trainee Program By Sex	Relationship of College To High School Program				Total
	Direct	Indirect	None	Cannot Determine	
Office					
Male					
N	26	8	13	1	48
%**	54.2	16.7	27.1	2.0	100.0
Female					
N	212	59	158	37	466
%	45.5	12.7	33.9	7.9	100.0
Distributive					
Male					
N	79	28	73	11	191
%	41.4	14.7	38.2	5.7	100.0
Female					
N	35	18	71	11	135
%	25.9	13.3	52.6	8.2	100.0
Trade and Industrial					
Male					
N	77	16	53	7	153
%	50.3	10.5	34.6	4.6	100.0
Female					
N	65	3	16	2	86
%	75.6	3.5	18.6	2.3	100.0
TOTAL					
Male					
N	182	52	139	19	392
%	46.4	13.3	35.5	4.8	100.0
Female					
N	312	80	245	50	687
%	45.4	11.6	35.7	7.3	100.0

*Includes both full-time and part-time students.

**Read percentages vertically.

Except for the female trade and industrial trainees (Table 20), at least seven out of ten of all the trainees attending a school or college part time are working on a full-time basis. This could indicate a trend of a recognized need for continued improvement by attending a post-high school educational institution even for those working at full-time positions.

Of those attending a school or college full time, more than one-third are working at least part time. It may also be, although the study did not attempt to determine it, that cooperative education and the ability to gain employment motivates trainees to further their education.

TABLE 19

DEGREE TO WHICH TRAINEES
WHO ATTEND SCHOOL OR COLLEGE ALSO WORK
(BY PROGRAM AND FIELD OF WORK)

Work Status	Field of Cooperative Training			Total
	Office	Distributive	Trade and Industrial	
Working Full Time				
N	128	102	64	295
%*	24.9	31.6	26.8	27.4
Field of Work:				
Office	118	24	6	148
Distributive	2	32	1	35
Trade and Industrial	8	47	57	112
No Reference	-	-	-	-
Working Part Time				
N	156	117	63	336
%	30.4	35.9	26.4	31.1
Field of Work:				
Office	99	17	8	124
Distributive	11	64	8	83
Trade and Industrial	12	17	37	66
No Reference	34	19	10	63
Not Working				
N	230	106	112	448
%	44.7	32.5	46.8	41.5
TOTAL	514	326	239	1,079
Percent of Those Attending School and Working in Their Cooperative Training Field	42.2	29.4	39.3	37.7

*Read percentages vertically.

TABLE 20

DEGREE TO WHICH TRAINEES WHO ATTEND SCHOOL OR COLLEGE ALSO WORK
(BY PROGRAM, SEX, AND FIELD OF WORK)

Work Status	Office Trainees Attending College				Distributive Trainees Attending College				Trade and Industrial Trainees Attending College			
	Full Time		Part Time		Full Time		Part Time		Full Time		Part Time	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Working Full Time												
N	-	7	15	106	9	4	57	33	5	1	55	3
%*	-	2.1	93.8	77.4	7.6	4.3	78.1	78.6	5.7	1.3	84.6	42.8
Field of Work:												
Office	-	7	9	102	-	-	4	20	-	-	5	1
Distributive	-	-	1	1	2	3	21	6	-	-	1	-
Trade and Industrial	-	-	5	3	7	1	32	7	5	1	49	2
No Reference	-	-	-	-	-	-	-	-	-	-	-	-
Working Part Time												
N	9	120	1	26	52	43	16	6	28	24	9	2
%	29.0	36.4	6.2	19.0	44.1	46.2	21.9	14.3	31.8	30.3	13.9	28.6
Field of Work:												
Office	3	71	-	25	6	9	2	-	3	5	-	-
Distributive	1	8	1	1	32	19	8	5	6	1	1	-
Trade and Industrial	1	11	-	-	5	8	3	1	12	17	7	1
No Reference	4	30	-	-	9	7	3	-	7	1	1	1
Not Working												
N	22	203	-	5	57	46	-	3	55	54	1	2
%	71.0	61.5	-	3.6	48.3	49.5	-	7.1	62.3	68.4	1.5	28.6
TOTAL	31	330	16	137	118	93	73	42	88	79	65	7

*Read percentages vertically.

Summary and Conclusions

Cooperative occupational training in Michigan secondary schools is by definition and practice an instructional program designed to develop occupational competence. Therefore, one measure of the success of such programs is the initial labor market record of graduates. Determining this behavior was the central problem of this study.

This study was undertaken by Michigan State University with partial funding from the Division of Vocational Education, State Department of Education. The population of the study consisted of all students in Michigan public high schools who:

1. graduated at the end of Spring semester, 1964, and
2. were at graduation, bona fide trainees in a reimbursable cooperative program in office, distributive, or trade and industrial occupations. The estimated population was 5,820. However, only 5,420 trainees were in the sample since a few schools did not make available the trainee names and addresses.

A questionnaire was used to obtain information; two follow-ups were made. Data were transferred to punch cards, tabulation and data analysis was done by a program on the CDC 3600 computer.

Of the 5,420 trainees in the sample, 2957 (55%) returned usable questionnaires. An early-late respondent technique was used to check the likeness of respondents to non-respondents. As a second verification, 300 non-respondents were contacted by telephone to determine employment status. No important differences were found; therefore, the respondents can be said to be representative of the total population.

Analysis of the data revealed that:

1. Regarding status of the graduates ten months after graduation:
   a. Six out of ten graduates were employed full time.
   b. One out of ten trainees was employed part time, most of these were also enrolled in a school or college.
   c. Nine out of a hundred had either entered military service or were housewives who were not in the labor market.
   d. About one out of a hundred was unemployed.
   e. Ten months after graduation, 27% of the trainees were still employed by their cooperative firm. Another 37% had worked for that firm subsequent to graduation but had since resigned.
   f. The number of trainees switching to an occupation other than the one for which they had received training varies among the three occupational fields. The proportions remaining in the occupational field for which trained are: office--about 89%, distributive--about 28%, and industrial--about 75%.
2. Regarding the length of unemployment following graduation:
   a. Six out of ten had secured their current full-time positions within one month after graduation, and all but 21% had secured

their current employment by the end of the summer, three months after graduation.

3. Regarding academic quality of the trainees:
   a. More than six out of ten trainees graduated in the upper half of their classes; as a group, the cooperative trainees are slightly superior to the average of their graduating class--when measured by rank in class.
   b. Office trainees are a superior group, with over four out of ten (43%) ranking in the upper quarter of their graduating class.
4. Regarding further education:
   a. Almost four (37%) out of ten trainees were attending a school or college. Of this number, 41% were attending a four-year college, 31% were attending a two-year public community junior college; and 23% were enrolled in the same kind of private nondegree post-high school educational institution.
   b. Of those who were attending a school or college, six out of ten were also working part or full time; 38% of them in the field for which they had been trained.

On the basis of the data in this study, the following conclusions can be drawn regarding cooperative occupational education in the Michigan public secondary schools:

1. Vocational education through the cooperative plan results in trainees finding employment soon after graduation, and this employment is often with the cooperative employer and generally in the field for which training was given.

2. Employers are generally well enough satisfied with cooperative trainees to offer them full-time employment upon graduation even in certain labor markets where supply exceeds demand.
3. Employers profit from participation in cooperative training because many trainees remain with them after graduation as regular employees.
4. While occupational competence is the major purpose of cooperative programs, it does not prevent trainees from gaining further education in colleges or other post-high school educational institutions. The data show that many of these students are employed while attending school. It may also be, although the data do not show it, that cooperative education and the ability to gain employment motivates trainees to further their education.
5. Cooperative trainees are above-average students when measured by rank in their graduating classes. Office trainees in particular are superior students. One may conclude that cooperative education programs are serving students across the entire range of academic achievement.
6. The data in the study concerning occupational switching raise some questions as to whether cooperative students in some schools are classified correctly according to their job placement in relation to the occupational area of the related class. There are also questions as to whether enough low-level students are being served in the office area.

On the basis of the formal data acquired in this study and the experiences of the research staff in working with the project, a number of recommendations can be made:

1. Similar studies should be continued each year so that a continuing inventory of the contributions of cooperative education can be obtained. (Note: At the time of writing, the State Board had decided to continue the study at least through the 1965 cooperative graduates.)
2. Each local school should analyze carefully the data provided by this study and should publicize results locally within the school, to the board of education, to parents, and to businessmen in the community service area.
3. The Division of Vocational Education of the State Department of Education should consider revising its present method of reporting from local schools so that it is clearly evident which students have completed the full year of cooperative education and which students have not completed their training (and reason why). There is also need to more closely scrutinize local programs to determine whether student placements accurately reflect the student's occupational goal and the occupational instruction he is receiving.
4. There is a need for many schools to keep a better system of student records if evaluation by follow-up is to become an integral phase of the evaluation of vocational education and its contributions.

5. There is a need for many schools to provide the coordinator with secretarial help to maintain and provide adequate records.

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APPENDIX A

MICHIGAN SECONDARY SCHOOLS OFFERING

COOPERATIVE OCCUPATIONAL EDUCATION PROGRAMS

School Code No. In Study	Name Of High School*	Location	Number of Cooperative Trainees		
			Reported To DPI	Reported As Graduating, June 1962	Responding To Survey
1	Adrian	Adrian	54	32	22
3	Allen Park	Allen Park	17	15	8
2	Alma	Alma	68	38	22
4	Ann Arbor	Ann Arbor	145	99	47
147	Avondale	Auburn Heights	12	11	6
5	Central	Battle Creek	158	38	13
6	Harper Creek	Battle Creek	31	NR	
7	Lakeview	Battle Creek	6	NR	
8	Central	Bay City	131	22	14
9	T. L. Handy	Bay City	102	51	34
10	Benton Harbor	Benton Harbor	77	71	38
11	Berkley	Berkley	72	49	31
12	Big Rapids	Big Rapids	40	30	14
13	Groves	Birmingham	28	6	2
14	Seaholm	Birmingham	66	NR	
15	Buchanan	Buchanan	13	NR	
16	Cadillac	Cadillac	39	27	15
17	Center Line	Center Line	37	31	18
148	Charlotte	Charlotte	42	34	19
135	Coldwater	Coldwater	39	31	18
18	Comstock	Comstock	15	NR	
19	Dearborn	Dearborn	182	NR	
20	Edsel Ford	Dearborn	85	36	25
21	Fordson	Dearborn	161	72	38
22	Lowrey	Dearborn	45	36	23
23	Robichard	Dearborn	35	32	14
26	Central	Detroit	39	18	5
24	Chadsey	Detroit	35	14	10
27	Cody	Detroit	99	61	31
30	Cass	Detroit	555	164	87
25	Cooley	Detroit	57	23	12
28	Denby	Detroit	73	51	26
29	Eastern	Detroit	30	24	7
143	Finney	Detroit	25	8	2
144	Ford	Detroit	50	30	19
31	Mackenzie	Detroit	88	33	10
32	Mumford	Detroit	49	43	20

NR = No Return

* = High school part of name omitted to save space.

(Continued)

(APPENDIX A, CONTINUED)

School Code No. In Study	Name Of High School*	Location	Number of Cooperative Trainees		
			Reported To DPI	Reported As Graduating, June 1962	Responding To Survey
145	Northern	Detroit	30	4	2
140	Northwestern	Detroit	63	11	3
141	Osborn	Detroit	66	47	18
33	Pershing	Detroit	152	67	21
34	Redford	Detroit	78	53	31
35	Southwestern	Detroit	55	15	5
146	Trombly Trade	Detroit	8	NR	
133	Washington Trade	Detroit	11	NR	
38	Western	Detroit	57	27	10
36	Wilbur Wright	Detroit	507	121	42
37	Lee M. Thurston	Detroit	90	65	38
40	Redford Union	Detroit	60	36	21
39	East Detroit	Detroit	17	17	12
41	Escanaba	Escanaba	40	NR	
42	Ferndale	Ferndale	76	42	32
43	Central	Flint	195	177	56
44	Northern	Flint	184	146	56
45	Southwestern	Flint	102	125	44
47	Atherton	Flint	7	5	3
48	Fraser	Fraser	37	NR	
49	Fremont	Fremont	19	17	14
50	Galesburg-Augusta	Galesburg	6	5	2
51	Garden City	Garden City	86	66	32
150	Grand Blanc	Grand Blanc	26	26	11
52	Grand Haven	Grand Haven	61	69	48
53	Central	Grand Rapids	48	38	16
54	Creston	Grand Rapids	77	65	38
55	Ottawa	Grand Rapids	35	22	11
56	South	Grand Rapids	39	35	14
57	Union High	Grand Rapids	121	110	49
61	Grosse Pointe	Grosse Pointe	45	41	27
62	Hancock	Hancock	31	20	8
63	Harper Woods	Harper Woods	58	NR	
151	Haslett	Haslett	17	17	5
152	Hazel Park	Hazel Park	18	17	14
65	Highland Park	Highland Park	60	31	7
66	Hillsdale	Hillsdale	34	28	12
67	Holland	Holland	86	71	46
153	West Ottawa	Holland	42	38	21

NR = No Return

(Continued)

* = High school part of name omitted to save space.

(APPENDIX A, CONTINUED)

School Code No. In Study	Name Of High School*	Location	Number of Cooperative Trainees		
			Reported To DPI	Reported As Graduating, June 1962	Responding To Survey
68	Houghton	Houghton	19	6	5
69	Inkster High	Inkster	20	NR	
70	Cherry Hill	Inkster	30	NR	
71	Ionia	Ionia	16	17	11
72	Iron Mountain	Iron Mountain	43	NR	
73	Jackson	Jackson	93	25	11
74	Parkside	Jackson	76	27	20
75	East Jackson	Jackson	48	36	18
76	Central	Kalamazoo	22	22	16
77	Loy Norrix	Kalamazoo	28	25	19
79	Eastern	Lansing	114	94	58
80	Everett	Lansing	103	68	38
81	Sexton	Lansing	88	76	42
83	Lapeer	Lapeer	87	42	17
84	Lincoln Park	Lincoln Park	126	43	25
85	Bentley	Livonia	75	64	48
155	Clarenceville	Livonia	30	16	15
154	Franklin	Livonia	76	51	38
86	Lowell	Lowell	19	14	9
156	Lamphere	Madison Heights	28	NR	
157	Madison	Madison Heights	58	60	31
87	Manistee	Manistee	23	16	12
88	Marquette	Marquette	25	NR	
90	Marshall	Marshall	46	26	18
91	Marysville	Marysville	27	21	12
92	Menominee	Menominee	48	34	16
93	Midland	Midland	231	187	137
95	Monroe	Monroe	149	29	8
158	Clintondale	Mt. Clemens	15	13	9
96	Mt. Clemens	Mt. Clemens	185	124	59
97	L'Anse Creuse	Mt. Clemens	51	48	18
98	Mt. Pleasant	Mt. Pleasant	53	47	26
99	Muskegon	Muskegon	205	127	77
100	Muskegon Heights	Muskegon	31	NR	
159	Orchard View	Muskegon	9	7	1
101	Niles	Niles	63	53	23
132	Brandywine	Niles	37	30	17
102	North Branch	North Branch	18	NR	
160	Okemos	Okemos	14	16	13
103	Owosso	Owosso	101	64	30

(Continued)

NR = No Return

* = High school part of name omitted to save space.

(APPENDIX A, CONTINUED)

School Code No. In Study	Name Of High School*	Location	Number of Cooperative Trainees		
			Reported To DPI	Reported As Graduating, June 1962	Responding To Survey
104	Parchment	Parchment	15	NR	
105	Petoskey	Petoskey	27	13	7
142	Elkton-Pigeon Bay Port	Pigeon	19	19	13
106	Plainwell	Plainwell	45	26	7
107	Plymouth	Plymouth	128	72	28
108	Central	Pontiac	101	74	38
109	Northern	Pontiac	52	24	6
110	Waterford Township	Pontiac	46	44	23
111	Waterford Kettering	Drayton Plains	51	29	25
112	Portage	Portage	44	27	15
113	Port Huron	Port Huron	139	NR	
114	Rochester	Rochester	23	19	8
161	Romulus	Romulus	12	12	6
162	Roseville	Roseville	20	16	14
115	Dondero	Royal Oak	145	47	25
116	Kimball	Royal Oak	136	44	28
117	Saginaw	Saginaw	168	37	14
118	Arthur Hill	Saginaw	178	78	47
119	Lakeview	St. Clair Shores	48	34	16
120	South Lake	St. Clair Shores	64	60	31
121	St. Joseph	St. Joseph	21	NR	
123	Sault Ste. Marie	Sault Ste. Marie	68	53	21
163	Southfield	Southfield	24	23	15
124	Sturgis	Sturgis	29	29	17
164	Swartz Creek	Swartz Creek	21	18	9
125	Taylor Center	Taylor	44	NR	
126	Traverse City	Traverse City	31	31	18
165	Trenton	Trenton	19	NR	
139	Utica	Utica	36	15	10
136	Walled Lake	Walled Lake	25	25	17
128	Fitzgerald	Warren	66	56	34
129	Lincoln	Warren	109	49	32
127	Warren	Warren	56	50	35
130	Wayne Memorial	Wayne	63	51	27

NR = No Return

* = High school part of name omitted to save space.

(Continued)

(APPENDIX A, CONTINUED)

School Code No. In Study	Name Of High School*	Location	Number of Cooperative Trainees		
			Reported To DPI	Reported As Graduating, June 1962	Responding To Survey
131	Theodore Roosevelt	Wyandotte	108	51	18
137	Rogers	Wyoming	35	29	18
138	Wyoming Park	Wyoming	13	8	5
59	Lee	Wyoming	38	15	6
60	Godwin Heights	Wyoming	25	17	8
TOTAL			10,377	5,420	2,957

NR = No Return
* = High school part of name omitted to save space.

Source: Division of Vocational Education, Michigan Department of Public Instruction

APPENDIX B

ELAPSED TIME BETWEEN GRADUATION OF TRAINEES
AND CURRENT FULL-TIME EMPLOYMENT
BY MONTH AND PROGRAM*

Number of Months Before Current Full-Time Position	Number of Trainees in Current Full-Time Employment							
	Office		Distributive		Trade and Industrial		Total	
	Monthly	Cumulative	Monthly	Cumulative	Monthly	Cumulative	Monthly	Cumulative
1 or Less	664	664	252	252	182	182	1,098	1,098
1 - 2	106	770	35	287	26	208	167	1,265
2 - 3	90	860	47	334	31	239	168	1,433
3 - 4	49	909	39	373	11	250	99	1,532
4 - 5	23	932	25	398	15	265	63	1,595
5 - 6	24	956	16	414	8	273	48	1,643
6 - 7	21	977	15	429	10	283	46	1,689
7 - 8	22	999	17	446	4	287	43	1,732
8 - 9	22	1,021	13	459	7	294	42	1,774
9 - 10	21	1,042	20	479	6	300	47	1,821

*This table portrays cooperative trainees on current full-time employment and does not necessarily present an accurate picture of first full-time employment. The latter would have been greater for the earlier months due to the possibility of changing full-time jobs.

APPENDIX C

ELAPSED TIME BETWEEN GRADUATION OF TRAINEES AND CURRENT FULL-TIME EMPLOYMENT BY MONTH, PROGRAM, AND SEX*

Number of Months Before Current Full-Time Position	Number of Trainees in Current Full-Time Employment															
	Office				Distributive				Trade and Industrial				Total			
	Male		Female		Male		Female		Male		Female		Male		Female	
	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative	Per Month	Cumulative
1 or Less	19	19	645	645	143	143	109	109	151	151	31	31	313	313	785	785
1 - 2	5	24	101	746	14	157	21	130	22	173	4	35	41	354	126	911
2 - 3	1	25	89	835	20	177	27	157	27	200	4	39	48	402	120	1,031
3 - 4	2	27	47	882	18	195	21	178	8	208	3	42	28	430	71	1,102
4 - 5	2	29	21	903	11	206	14	192	8	216	7	49	21	451	42	1,144
5 - 6	3	32	21	924	8	214	8	200	5	221	3	52	16	467	32	1,176
6 - 7	1	33	20	944	7	221	8	208	10	231	-	52	18	485	28	1,203
7 - 8	4	37	18	962	10	231	7	215	3	234	1	53	17	502	26	1,230
8 - 9	-	37	22	984	7	238	6	221	5	239	2	55	12	514	30	1,260
9 - 10	2	39	19	1,003	9	247	11	232	4	243	2	57	15	529	32	1,292

*This table portrays trainees on current full-time employment and does not necessarily present an accurate picture of first full-time employment. The latter would have been greater for the earlier months due to the possibility of changing full-time jobs.

APPENDIX D

JOB SHIFTS AS SHOWN BY OCCUPATION OF TRAINEES (TEN MONTHS AFTER GRADUATION)

(FULL AND PART TIME)

Occupational Area	Field of Cooperative Training						Total	
	Office		Distributive		Trade and Industrial			
	N	%	N	%	N	%	N	%
Clerical	784	48.8	166	20.2	45	8.5	995	33.6
Secretarial	317	19.8	11	1.3	1	.2	329	11.1
Retail Sales	24	1.5	186	22.7	27	5.1	237	8.0
Service Industry	2	.1	1	.1	-	-	3	.1
Skilled	16	1.0	15	1.8	49	9.3	80	2.7
Semi-skilled	14	.9	73	8.9	113	21.3	200	6.8
Unskilled	36	2.2	162	19.7	132	25.0	330	11.2
Miscellaneous*	44	2.7	40	4.8	26	4.9	110	3.7
Unemployed	17	1.1	7	.8	5	.9	29	1.0
Students**	234	14.6	106	12.9	112	21.2	452	15.3
Housewives***	117	7.3	56	6.8	19	3.6	192	6.5
TOTAL	1,605	100.0	823	100.0	529	100.0	2,957	100.0

*Trainees not indicating current positions or not classified above.

**Attending school and not working full or part time.

***Married and not working full or part time.

APPENDIX E

JOB SHIFTS AS SHOWN BY SEX AND OCCUPATION OF TRAINEES (TEN MONTHS AFTER GRADUATION)

(FULL AND PART TIME)

Occupational Area	Field of Cooperative Training											
	Office				Distributive				Trade and Industrial			
	Male		Female		Male		Female		Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
Clerical	20	26.3	764	50.0	26	6.2	140	34.7	17	4.7	28	16.8
Secretarial	1	1.3	316	20.7	1	.2	10	2.5	-	-	1	.6
Retail Sales	3	3.9	21	1.4	115	27.5	71	17.6	24	6.6	3	1.8
Service Industry	-	-	2	.1	-	-	1	.2	-	-	-	-
Skilled	3	3.9	13	.9	8	1.9	7	1.7	38	10.5	11	6.6
Semi-skilled	8	10.5	6	.4	57	13.6	16	4.0	100	27.6	13	7.8
Unskilled	11	14.7	25	1.6	121	28.9	41	10.1	101	27.9	31	18.6
Miscellaneous*	7	9.1	37	2.4	33	7.9	7	1.7	22	6.1	4	2.4
Unemployed	-	-	17	1.1	1	.2	6	1.5	3	.8	2	1.2
Students**	23	30.3	211	13.8	57	13.6	49	12.1	57	15.8	55	32.9
Housewives***	-	-	117	7.6	-	-	56	13.9	-	-	19	11.3
TOTAL	76	100.0	1,529	100.0	419	100.0	404	100.0	362	100.0	167	100.0

*Trainees not indicating current positions or not classified in the above.

**Attending school and not working full or part time.

***Married and not working full or part time.

APPENDIX F

DEGREE TO WHICH TRAINEES REMAIN WITH THEIR HIGH SCHOOL COOPERATIVE PROGRAM EMPLOYER BY PROGRAM (TEN MONTHS AFTER GRADUATION)

	Field of Cooperative Training			
	Office	Distributive	Trade and Industrial	Total
Presently Employed by Cooperative Firm				
N	475	192	132	799
%*	29.6	23.3	25.0	27.0
Have Worked for Cooperative Employer Since Graduation But Are Not Now				
N	513	349	235	1,097
%	32.0	42.4	44.4	37.1
Not Employed by Cooperative Employer Since Graduation				
N	602	270	161	1,033
%	37.5	32.8	30.4	34.9
No Reference				
N	15	12	1	28
%	.9	1.5	.2	1.0
TOTAL				
N	1,605	823	529	2,957
%	100.0	100.0	100.0	100.0

*Read percentages vertically.